

# Fuels and Fire Behavior Advisory

## Northern Rockies Geographic Area

Effective July 17, 2021



**Subject:** The Northern Rockies Geographic Area has seen an unusually early start to high fire activity. Record high temperature, persistent low relative humidity, and record low fuel moistures are contributing to large fire growth and significant resistance to control. Above normal fire potential and ongoing activity will likely persist into September.

**Discussion:** Several factors beginning last fall are contributing to fire activity this summer. A drought condition since September 2020 has stressed vegetation and reduced foliar moisture. Spring precipitation was significantly below normal with only a brief green-up of herbaceous fuels. Record high temperatures set up an early curing of live fuels at all elevations. The winter snowpack didn't compress the previous year's growth and are now intermixed with curing live fuels and contributing to fire spread. This added fine fuel loading combined with dry, windy conditions, extremely low dead fuel moistures and ongoing drought has increased probability of ignition and elevated fire potential. Aggressive to extreme fire behavior is already occurring, with fires burning actively through the night, spotting distances up to one mile, and complete consumption of heavy fuels. Moreover, instability from recurring, exceptionally strong high pressure systems is conducive to plume dominated fire behavior.

**Difference from normal conditions:** ERCs are above the 97<sup>th</sup> percentile a month earlier than normal, setting new 10-year maximums, and trending higher. The combination of numerous fire starts in early July, a historic heatwave followed by abundant lightning and more hot, dry, windy conditions, resulted in NRCC's earliest ascent ever to PL5 on July 11. Similar weather patterns and conditions are anticipated to occur again. In prior years, PL5 typically lasted until early to mid-September in the Northern Rockies, suggesting many more weeks remain in this already-busy season.

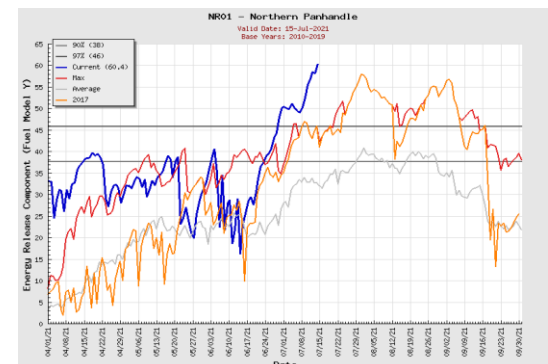
### Concerns to Firefighters and the Public:

- Mop up in 100 and 1000 hour fuels will be complicated by critically low dead fuel moistures making for resource intensive operations even on small fires.
- Fuels that are usually barriers such as aspen and high severity fire scars may burn actively and contribute to fire spread.
- Drought conditions and extremely dry fuels may contribute to plume dominated fire behavior and increased long range spotting.
- Receptive fuels will increase ignitions from lightning.

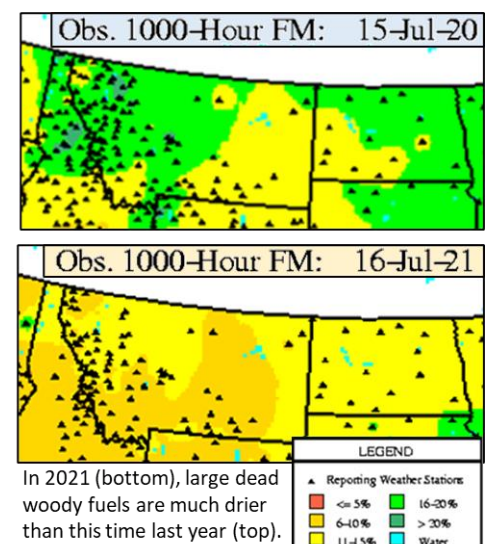
### Mitigation Measures:

- Fire managers should prepare to support more frequent fire occurrence and incidents of higher complexity and/or duration.
- Due to increased fire behavior employing indirect strategies and tactics may be necessary to protect firefighters.
- The season has the potential to be very long. Managers should be prepared to support suppression activity for a long period.
- Ensure all resources, local and from outside the area, are briefed on the potential for fire behavior to exceed previous norms.
- Increased spotting distance and availability of heavy fuels will necessitate more robust containment lines and additional patrols

**Area of Concern:** All the Northern Rockies Geographic Area is included. There is variability of conditions within the area, but these differences are leveling out rapidly.



ERC graph (above) for Idaho's Northern Panhandle, showing trend line rising above previous maximums.



In 2021 (bottom), large dead woody fuels are much drier than this time last year (top).